



HYB-005US7.ST25

SEQUENCE LISTING

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Yu, Dong
Agrawal, Sudhir

<120> Modulation of Immunostimulatory Activity of Immunostimulatory
Oligonucleotide Analogs By Positional Chemical Changes

<130> HYB-005US7 (1006.006)

<140> US 10/694,207
<141> 2003-10-27

<150> US 09/712,898
<151> 2000-11-15

<150> US 60/235,452
<151> 2000-09-26

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<223> c = 5-hydroxydeoxycytidine

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<223> g = C3-Linker

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<222> 4, 5

<223> a at position 4 = C3-Linker

c at position 5 = C3-Linker

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<210> 28

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<222> 1, 2

<223> cc at positions 1 & 2 = C3-Linker

<400> 28

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18

<210> 29

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<400> 29

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<210> 30

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18

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<222> 14, 15
<223> t at position 14 = C3-Linker
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<223> t = C3-Linker

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<223> g = 3'-Deoxynucleoside

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<223> c = 3'-Deoxynucleoside

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<223> c = 3'-Deoxynucleoside

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<210> 58

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 <223> t = Methyl-phosphonate

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 <223> c at position 15 = Methyl-phosphonate
 t at position 16 = Methyl-phosphonate

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 <223> a = 2'-O-Methylribonucleoside

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<221> modified_base
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 <223> c at positions 2 & 3 =
 2'-O-Methoxyethylribonucleoside

<400> 72
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<210> 73
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 <223> 3'-5' linkage

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 <223> 5'-5' linkage

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 <223> 3'-3' linkage

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 <223> 3'-3' linkage

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 <222> 5
 <223> c = beta-L-Deoxynucleoside

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 <223> t at position 4 = beta-L-Deoxynucleoside
 c at position 5 = beta-L-Deoxynucleoside

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 <222> 14, 15
 <223> t at position 14 = beta-L-Deoxynucleoside
 c at position 15 = beta-L-Deoxynucleoside

 <400> 84
 ctatctgacg ttctctgt 18

 <210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

 <221> modified_base
 <222> 9, 10

<223> c at position 9 = beta-L-Deoxynucleoside
 g at position 10 = beta-L-Deoxynucleoside

<400> 85
 ctatctgacg ttctctgt 18

<210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 7
 <223> g = beta-L-Deoxynucleoside

<400> 86
 ctatctgacg ttctctgt 18

<210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 12
 <223> t = beta-L-Deoxynucleoside

<400> 87
 ctatctgacg ttctctgt 18

<210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> (1)...(18)
 <223> all nucleotides = beta-L-deoxynucleoside

<400> 88
 ctatctgacg ttctctgt 18

<210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

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<221> modified_base
<222> 5
<223> c = 2'-O-Propargyl-ribonucleoside

<400> 89
ctatctgacg ttctctgt                                     18

<210> 90
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 15
<223> c = 2'-O'Propargyl-ribonucleoside

<400> 90
ctatctgacg ttctctgt                                     18

<210> 91
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = 1',2'-Dideoxyribose
      c at position 5 = 1',2'-Dideoxyribose

<400> 91
cctactagcg ttctcatc                                     18

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = C3-Linker
      c at position 5 = C3-Linker

<400> 92
cctactagcg ttctcatc                                     18

<210> 93
<211> 18
<212> DNA

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<213> Artificial Sequence

<220>

<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 4, 5

<223> a at position 4 = 3'-methoxyribonucleoside
c at position 5 = 3'-methoxyribonucleoside

<400> 93

cctactagcg ttctcatc

18

<210> 94

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 4, 5, 12

<223> a at position 4 = 1',2'-Dideoxyribose
c at position 5 = 1',2'-Dideoxyribose
t at position 12 = 2'-methoxyribonucleoside

<400> 94

cctactagcg ttctcatc

18

<210> 95

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified linkage of oligodeoxynucleotide phosphorothioate

<400> 95

cctactaggc ttctcatc

18

<210> 96

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 10

<223> g = 7-deazaguanine

<400> 96

ctatctgacg ttctctgt

18

<210> 97

<211> 18

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> modified oligodeoxynucleotide phosphorothioate

 <221> modified_base
 <222> 9
 <223> g = 7-deazaguanine

 <400> 97
 ctatctgagc ttctctgt 18

 <210> 98
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> modified oligodeoxynucleotide phosphorothioate

 <400> 98
 tctcccagcg tgcgccat 18

 <210> 99
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> modified oligodeoxynucleotide phosphorothioate

 <221> modified_base
 <222> 10,14
 <223> g at positions 10 and 14 = 7-deazaguanine

 <400> 99
 tctcccagcg tgcgccat 18

 <210> 100
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> modified oligodeoxynucleotide phosphorothioate

 <221> modified_base
 <222> 5
 <223> c = C3-Linker

 <221> modified_base
 <222> 10
 <223> g = 7-deazaguanine

 <400> 100
 ctatctgacg ttctctgt 18

<210> 101
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 10
 <223> g = 6-thioguanine

<400> 101
 ctatctgacg ttctctgt

18

<210> 102
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 9
 <223> g = 6-thioguanine

<400> 102
 ctatctgagc ttctctgt

18

<210> 103
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 9
 <223> c = 4-thiouridine

<400> 103
 ctatctgacg ttctctgt

18

<210> 104
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 5
 <223> c = 1,2-Dideoxyribose

<221> modified_base

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<222> 9
<223> c = 4-thiouridine

<400> 104
ctatctgacg ttctctgt                                18

<210> 105
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> c = Ara-C

<400> 105
ctatctgacg ttctctgt                                18

<210> 106
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 10
<223> c = Ara-C
<400> 106
ctactctgac cttctctgt                                19

<210> 107
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> c = 1',2'-Dideoxyribose

<400> 107
ctatctgacg ttctctgt                                18

<210> 108
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

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<221> modified_base
<222> 8
<223> a = 1',2'-Dideoxyribose

<400> 108
ctatctgacg ttctctgt 18

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 6
<223> t = 1',2'-Dideoxyribose

<400> 109
ctatctgacg ttctctgt 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4
<223> t = 1',2'-Dideoxyribose

<400> 110
ctatctgacg ttctctgt 18

<210> 111
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 11
<223> t = 1',2'-Dideoxyribose

<400> 111
ctatctgacg ttctctgt 18

<210> 112
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 13

<223> c = 1',2'-Dideoxyribose

<400> 112

ctatctgacg ttctctgt

18